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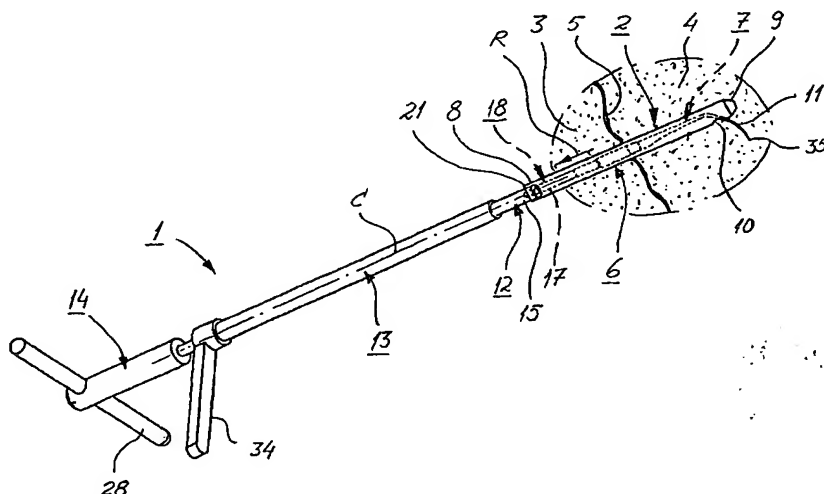
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(54) Title: DEVICE FOR EXTRACTION OF PINS AT FIXATION MEANS FOR FIXATION OF BONE FRAGMENTS AT BONE FRACTURES



(57) Abstract: The present invention relates to a device for extraction of pins at fixation means for fixation of bone fragments at bone fractures. The fixation means (2) includes a sleeve (6) and at least one pin (7) provided in said sleeve. The sleeve (6) has at a front end portion (9) at least one opening (10) in a longitudinal side thereof. A front part (11) of the pin (7) extends, when it is located in an operating position, out of the sleeve (6) through the opening (10) and engage bone material of one of the bone fragments (3, 4). The extraction device (1) is adapted to pull the pin (7) in a backwards direction relative to the sleeve (6) in order to withdraw the front part (11) of the pin (7) from bone material of one of the bone fragments (3, 4) and into the sleeve (6). The extraction device (1) comprises means (12, 13, and 14) which are provided to draw or pull the pin (7) backwards relative to the sleeve (6) without thereby subjecting the pin (7) to torsional forces in relation thereto.

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INTERNATIONAL SEARCH REPORT

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PCT/SE 03/00558

A. CLASSIFICATION OF SUBJECT MATTER

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According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7: A61B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-INTERNAL, WPI DATA

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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A	US 4498468 A (LARS I. HANSSON), 12 February 1985 (12.02.85), abstract, fig. --	1-18
A	WO 0211632 A1 (HANSSON, HENRIK), 14 February 2002 (14.02.02), abstract, fig. --	1-18
A	US 2631584 A (A.T. PURIFICATO), 17 March 1953 (17.03.53), fig. --	1-18

☒ Further documents are listed in the continuation of Box C.
 ☒ See patent family annex.

* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E" earlier application or patent but published on or after the international filing date	"Y" document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
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"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search	Date of mailing of the international search report
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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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